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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,434

12/10/2004

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36-1876

3230

23117 7590 11/10/2009
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EXAMINER

BRYANT, DOUGLAS J.

ART UNIT

PAPER NUMBER

2195

MAIL DATE

DELIVERY MODE

11/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,434	Applicant(s) MCKEE, PAUL F.	
	Examiner DOUGLAS BRYANT	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/14/2009, 6/02/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 and 3-23 are pending.
2. This office Action is in response to amendments filed on July 14, 2009.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following claim lacks antecedent basis:
 - i. said connection policy data. Exr. Suggest “task-suited logical network connection policy data”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier et al. (Choquier) US Patent 5,774,668 in view of Traversat et al. (Traversat) US Patent Application 2002/0184310 A1.

5. As per claim 1, Choquier teaches the invention substantially as claimed including a method of dividing a task amongst a plurality of nodes within a distributed computer, said method comprising

receiving immediate neighbor requirements data indicating desired properties of immediate neighbor nodes in a task-suited Logical network of nodes and interconnections between them, which properties lead to said task-suited Logical network being suited to said task or tasks of a similar type **(Col 2, lines 44-47)**;

distributing said task amongst the plurality of nodes in accordance with the task-suited Logical network topology thus calculated **(Col 2, lines 49-52)**.

6. Choqueir is silent to the fact of receiving node capability data for nodes available to join said task-suited Logical network and calculating a task-suited Logical network topology in dependence upon said immediate neighbor requirements data and said node capability data.

7. However, Traversat teaches receiving node capability data for nodes available to join said task-suited Logical network **(Para 30, 1-4)**;

calculating a task-suited Logical network topology in dependence upon said immediate neighbor requirements data and said node capability data **(Para 74, lines 1-3)**;

8. It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teachings of Traversat into the teachings of

Art Unit: 2195

Choquier to receive the capabilities of the nodes available to join the task-suited logical network and create and or update the topology so the nodes would have a better knowledge of where content, services and other information is accessible. This modification would have been obvious because anyone of ordinary skill in the art would want to update the database (graph) with the nodes that meets the qualification to join the task-suited network as well as the capabilities that each available node joining and already apart of the network has.

9. As per claim 3, Traversat teaches a method according to claim 1 wherein said immediate neighbor requirements data comprises one or more property value pairs (**Para 209, lines 1-8**).

10. As per claim 4, Traversat teaches a method according to claim 3 wherein said immediate neighbor requirements data is arranged in accordance with a predefined data structure defined by requirements format data stored in said computer (**Para 209, lines 1-8**),

said method further comprising the step of verifying that said immediate neighbor requirements data is formatted in accordance with predefined data structure by comparing said immediate neighbor requirements data to said requirements format data (**Para 28, lines 3-5**).

Art Unit: 2195

11. As per claim 5, Traversat teaches a method according to claim 1 wherein said node capability data comprises one or more property value pairs (**Para 209, lines 1-8**).

As per claim 6, Choquier teaches a method according to claim 5 wherein said

node capability data is arranged in accordance with a predefined data structure defined by node capability format data stored in said computer (**Col 2, lines 56-57**)

said method further comprising that said node capability data is formatted in accordance with predefined data structure by comparing said node capability data to said node capability format data (**Col 2, lines 58 -66**).

12. As Per claim 7, Traversat teaches a method according to claim 1 further comprising the step of operating a node seeking to join said task-suited Logical network task group to generate node capability data and send said data to one or more nodes already included within said task-suited Logical network, task group (**Para 29, lines 1-6**).

13. As per Claim 8, Choquier teaches a method according to claim 1 wherein said task distribution involves a node forwarding a task to a node which neighbors it in said task- suited Logical network task group topology (**Col 2, lines 49-52; Col 3, lines 47-49**)

14. As per claim 9, Choquier teaches a method according to claim 1 wherein said immediate neighbor requirements data comprises data relating to the amount of data

storage or processing power available at said node (**Col 2, lines 56-62**).

15. As per claim 10, Choquier teaches a method according to claim 1 wherein said immediate neighbor requirements data comprises data relating to the quality of communication between said node and one or more nodes already selected for said task-suited Logical network, task group (**Col 12, lines 55-67**).

16. Claims 11-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat et al. (Traversat) US Patent Application 2002/0184310 A1 in view of Chao et al. (Chao) US Patent 6,393,485.

17. As per claim 11, Traversat teaches a distributed computer apparatus comprising: a plurality of data processor nodes, each connected to at least one other of said data processor nodes via a communications link (**Para 27, lines 1-2**); each of said nodes having recorded therein:

a) task-suited Logical network membership policy data (**Para 28, lines 3-5 [it's understood that a policy data is recorded within the node once it joins the peer network]**);

task-suited Logical network membership request handling code executable to receive a task-suited Logical network connection membership request including node profile data (**Para 28, lines 7-9**)

and decide whether said request is to be granted in dependence upon the task-suited Logical network membership policy data stored at said node (**Para 28, lines 3-5**)

and to send a response to the node sending said request indicating that said request is successful **(Para 30, lines 1-10).**

18. Traversat is silent to the teachings of graph data representing a task-suited Logical network comprising a plurality of nodes and the links between them and a processor readable code executable to update said graph data, said code comprising a task-suited Logical network membership request generation code executable to generate and send a task-suited Logical network membership request including node profile data to another node indicated to be a member of said task-suited Logical network and task-suited Logical network update code executable to update the graph data stored at said node on deciding to grant a task- suited Logical network connection request received from another node,

19. However Chao teaches a graph data representing a task-suited Logical network comprising a plurality of nodes and the links between them **(Col 3, lines 38-46).**

a processor readable code executable to update said graph data, said code comprising a

task-suited Logical network membership request generation code executable to generate and send a task-suited Logical network membership request including node profile data to another node indicated to be a member of said task-suited Logical network **(Col 4, lines 8-12)**

task-suited Logical network update code executable to update the graph data stored at said node on deciding to grant a task-suited Logical network connection request received from another node **(Col 4, lines 6-7)**

20. It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teachings of Chao into the teachings of Traversat to have a graph displaying all of the nodes and the links between them as well as executable code generating and send out letting all of the nodes in the network know that a new node has either joined or left the network. This modification would have been obvious because anyone of ordinary skill in the art would want to an updated database (graph) with the nodes that are members of the network as well as their capabilities that each available node has and the connection links to the network.

21. As per claim 12, (Original) Distributed computer apparatus according to claim 11, wherein each node further has recorded therein node profile data generation code executable to generate said node profile data (**Para 182, lines 1-16**)

22. As per claim 13, Traversat teaches a Distributed computer apparatus according to claim 12, wherein each node further has recorded therein task-suited Logical network policy data distribution code executable to distribute said policy data, said policy distribution code comprising:

policy input code operable to receive policy data (**Para 28, lines 5-6 [determines who qualifies]**);

policy storage code operable to store said received policy data at said node (**Para 248, lines 1-4**) ; and

policy forwarding code operable forward said policy from said node to at least one other

node in said distributed computer apparatus (**Para 30, lines 1-10**).

23. As per claim 14, Traversat teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein policy format data (**Para 29, lines 9-11[advertisements are the policy format]**);

and policy data format verification code executable to check that said received policy data accords with said policy format data (**Para 28, lines 1-9**).

24. As per claim 15, Traversat teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein profile format data (**Para 29, lines 9-11[advertisements are the policy format]**);

and profile data format verification code executable to check that said received node profile data accords with said profile format data (**Para 182, lines 1-8 [it understood that before downloading and installing services that a verification check is done to match format data]**)

25. As per claim 16, Traversat teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein received program data execution code executable to receive program data from another of said nodes and to execute said program (**Para 182, lines 1-7**)

26. As per claim 17, Traversat teaches a distributed computer apparatus according to claim 16, wherein said plurality of processor nodes comprise computers executing

Art Unit: 2195

different operating systems programs, and said received program execution code is further executable to provide a similar execution environment on nodes despite the differences in said operating system programs (**Para 72, lines 1-11**).

27. As per claim 18, Traversat teaches a method of operating a member node of a distributed computing network, said method comprising:

accessing task-suited Logical network connection membership policy data comprising one or more property value pairs indicating one or more criteria for becoming an immediate neighbor of said member node in a task-suited Logical network built on said distributed computing network (**Para 28, lines 6-8**);

receiving, from an applicant node, profile data comprising one or more property value pairs indicating characteristics of the applicant node (**Para 28, lines 3-6**);

determining whether said applicant profile data indicates that said applicant node meets said connection membership criteria for becoming an immediate neighbor of said node in said task-suited Logical network (**Para 26, lines 4-10**);

Choa teaches a response to said determination indicating that said applicant node meets said connection membership criteria, updating task-suited Logical distributed computing network membership data accessible to said node to indicate that said applicant node is an immediate neighbor of said member in said task-suited Logical network (**Col 4, lines 6-7**).

28. As Per claim 19, Choa teaches a method according to claim 18 wherein said member node stores graph data representing a task-suited Logical network comprising a plurality of nodes and the links between them **(Col 3, lines 38-46)**.

29. As per claim 20, Traversat teaches a method according to claim 19 wherein said member node stores said task-suited Logical network connection membership policy data **(Para 29, lines 9-11[advertisements are the policy format])**.

30. As per claim 21, Chao teaches a method according to claim 20 further comprising the steps of:

updating said connection policy data **(Col 4, lines 6-7)**;

removing indications that one or more nodes are members of said task-suited network from said graph data **(Col 4, lines 8-10 it is understood that when a change occurs such as a peer leaving the group the indications are removed from the database)**;

sending an indication to said one or more nodes requesting them to re-send said profile data **(Col 4, lines 10-12 [it is understood once a change is made that profile data has to be resent in order to keep the configuration database updated accurately])**.

31. As per claim 23, Traversat teaches a method of operating a network to create a logical network topology based on the physical topology of said network, said logical network topology being suited to a task, said method comprising:

identifying a member node as a member of said task-suited logical network (**Para 432, lines 7-11**);

storing immediate neighbor requirements data representing what is required of nodes in order for them to be a suitable immediate neighbor of said member node in said task-suited Logical network (**Para 29, lines 6-9**);

operating network to compare said candidate neighbor its candidate node capability data with said immediate neighbor requirements data (**Para 28 and Para 30 [in order to be a member, the capabilities have to be compared with the policy and since each neighbor is already apart of the cluster, it is automatically compared to the neighbor nodes]**);

responsive to said comparison indicating that said candidate neighbor node meets said requirements, making said node an immediate neighbor in a said logical network (**Para 30, lines 1-10**).

Choa teaches storing candidate neighbor node capability data representing the capabilities of a candidate neighbor node in said physical network (**Col 4, lines 6-20**);

32. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat et al. (Traversat) US Patent Application 2002/0184310 in view of A1Choquier et al. (Choquier) US Patent 5,774,668.

33. As per claim 22, Traversat teaches a computer readable storage medium containing a computer program product loadable into the internal memory of a digital computer including an executable program code comprising:

task-suited Logical network immediate neighbor task group requirements data reception code executable to receive and store received task-suited network immediate neighbor requirements data (**Para 28, lines 9-12**);

comparison code executable to compare said node capability data and said task-suited Logical network immediate neighbor group requirements data to find whether the node represented by said node capability data meets said task-suited Logical network requirements (**Para 28, lines 3-6**) ;

task-suited Logical network topology update code executable to add an identifier of said represented node to a task-suited Logical network task group topology data structure on said comparison code indicating that said represented node meets said requirements (**Para 432, lines 7-11**);

34. Traversat is silent to the teachings of a task execution code executable to receive code from another node in said task- suited Logical network task group and to execute said code or forward said code to a node represented as a neighbor in said task-suited Logical network topology data structure and node capability profile data reception code executable to receive and store received node capability profile data.

35. However, Choquier teaches a task execution code executable to receive code from another node in said task- suited Logical network task group and to execute said code or forward said code to a node represented as a neighbor in said task-suited Logical network topology data structure (**Col 2, lines 49-52**).

node capability profile data reception code executable to receive and store received node capability profile data (**Col 2, lines 63-66**);

36. It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teachings of Choquier into the teachings of Traversat to have the ability to receive code from any of the nodes within the network or forward code to another node with in the network. This modification would have been obvious because anyone of ordinary skill in the art would want to be able to receive or forward code to any of the nodes within the network because they have already met the membership policy qualifications showing that everyone in the network has some type of capability that can accessed by other nodes of the member network to possibly help balance a task load.

Response to Arguments

37. Applicant's arguments with respect to claims 1 and 3-23 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

38. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

39. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS BRYANT whose telephone number is (571)270-7707. The examiner can normally be reached on M-F 8:00-5:00pm Est. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-ai can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Art Unit: 2195

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